

## **REMARKS**

Claims 123, 126, 141 and 149-160 were pending in the present application. Claims 153-158 and 160 were withdrawn from consideration. By virtue of this response, claims 153-158 and 160 have been canceled and claims 123, 126, and 159 have been amended. Accordingly, claims 123, 126, 141, 149-152, and 159 are currently under consideration. Amendment and cancellation of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented. No new matter has been added.

Applicant would like to thank the examiner for the in-person interview on May 19, 2011 with Amir Tehrani and Applicant's representative, Esther Kepplinger. During the interview, proposed claim amendments were discussed in view of the cited reference of Ignagni et al.

### **Election/Restrictions**

The requirement for restriction set out two groups of claims.

In response, Applicant hereby affirms the election of Group I (claims 126, 126, 141, 149-152, and 159), without traverse.

### **Rejections under 35 USC § 112**

Claims 123 and 126 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being incomplete for omitting essential elements, such omission amounting to a gap between the elements.

Claims 123 and 126 have been amended to clarify that the at least one electrode is configured to sense respiration. Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph.

### **Concerning the Claim Objections**

Claim 159 is objected to under 37 CFR § 1.75(e), as allegedly being of improper dependent form for failing to further limit the subject matter of a previous claim.

Dependent claim 159 has been amended. Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejection under 35 CFR § 1.75(c).

**Rejections under 35 USC § 102**

Claims 123, 126, 141 and 151-152 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Ignagni et al. (US Pub. 2005/0021102 A1).

Independent claim 123 has been amended to recite “wherein the stimulator is further programmed to monitor the adjusted breathing cycle of the patient, compare it against the patient’s baseline intrinsic level and when the breathing is not at a desired level, to then adjust one or more parameters of the electrical stimulation signal and provide stimulation with each breath to incrementally adjust until the breathing cycle is further adjusted to reach the desired level”. Independent claim 126 has been similarly amended.

Support may be found throughout the specification, particularly at [0070] which discloses that “[a]fter delivering the pacing output to the phrenic nerve and/or diaphragm muscle, the EMG is observed 305, if the EMG is not approximately at the intrinsic sleep level, then the parameters are adjusted to bring the EMG more within the appropriate range 306 and elicit a response closer to intrinsic breathing.” Paragraph [0071] further discloses where “[t]he system may attempt to match the desired EMG with the pacing output by adding on to the existing EMG. Once method may involve calculating the tidal volume based on the peak value of the existing EMG voltage output, pulse width, thus area under the respiration curve; calculating the pacing energy ... required to achieve the tidal volume ...; and increasing the EMG or pacing an increased calculated amount to achieve the desired tidal volume.” Additionally, the specification further discloses at [0072], “[i]f after delivering the pacing output 324, the EMG is not at the intrinsic sleep level 325, then the parameters are adjusted to elicit the intrinsic response 331 and the parameters are loaded 3232 and delivered 324 again.”

On the other hand, Ignagni et al. fails to show or describe a stimulator which is programmed to monitor an adjusted breathing cycle of the patient, compare it against the patient’s baseline intrinsic level, and when the breathing is not at a desired level, to then adjust one or more parameters of the electrical stimulation signal and provide stimulation

with each breath to incrementally adjust until the breathing cycle is further adjusted to reach the desired level.

Moreover, dependent claim 159 now recites where the stimulator is further programmed to no longer deliver the stimulation signal when the breathing has reached the desired level. Ignagni et al. fails to show or describe any cessation of its stimulation signal once an adjusted breath has reached a desired level.

Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e).

**Rejections under 35 USC § 102/103**

Claims 149-150 are rejected under 35 U.S.C. § 102(c) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Ignagni et al.

Dependent claims 149-150 depend ultimately from independent claim 123 and are patentable over Ignagni et al. for at least the same reasons above. Accordingly, Applicant respectfully requests the reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e)/103(a).

## CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections and pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the appropriate fee and/or petition is not filed herewith and the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with this filing to **Deposit Account No. 50-3973** referencing Attorney Docket No. **RMXLNZ00100**. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

/Johney U. Han/

Johney U. Han  
Registration No. 45,565

**Customer No. 40518**  
Levine Bagade Han LLP  
2400 Geng Road, Suite 120  
Palo Alto, CA 94303  
Direct: (650) 242-4217  
Fax: (650) 284-2180